

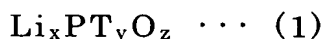
CLAIMS

1. A negative electrode for a battery, the negative electrode comprising:

5 a collector;

an active material layer provided on the collector, the active material layer including at least one kind of matter in a group consisting of an elementary substance of tin, an elementary substance of silicon, an alloy including at least one
10 of tin and silicon, and a compound including at least one of tin and silicon; and

an inorganic compound layer provided on the active material layer, the inorganic compound layer having a chemical composition expressed by general formula (1) described below,
15 and having lithium ion conductivity.



wherein component T is at least one kind of element selected from an element group consisting of element symbols Ti, Cu, Zr, Mo, Ta, and W, and additionally x, y, and z satisfy
20 $2.0 \leq x \leq 7.0$, $0.01 \leq y \leq 1.0$, and $3.5 \leq z \leq 8.0$, respectively.

2. The negative electrode for a battery according to claim 1, wherein x, y, and z satisfy $2.0 \leq x \leq 3.0$, $0.01 \leq y \leq 0.50$, and $3.5 \leq z \leq 4.0$, respectively, in the general formula (1).

25

3. The negative electrode for a battery according to claim 1, wherein x, y, and z satisfy $2.0 \leq x \leq 3.0$, $0.01 \leq y \leq 1.0$, and $3.5 \leq z \leq 7.0$, respectively, in the general formula (1).

30

4. The negative electrode for a battery according to claim

1, wherein the active material layer includes lithium after charging.

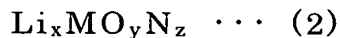
5 1, wherein the active material layer includes metal and the metal is alloyed with the collector at a part of an interface with the collector.

6. A negative electrode for a battery, the negative
10 electrode comprising:

a collector;

an active material layer provided on the collector, the active material layer including at least one kind of matter in a group consisting of an elementary substance of tin, an
15 elementary substance of silicon, an alloy including at least one of tin and silicon, and a compound including at least one of tin and silicon; and

an inorganic compound layer provided on the active material layer, the inorganic compound layer having a chemical
20 composition expressed by general formula (2) described below, and having lithium ion conductivity.



wherein component M is at least one kind of element selected from an element group consisting of element symbols
25 Si, B, Ge, Al, C, Ga, and S, and additionally x, y, and z satisfy one of:

$0.6 \leq x \leq 1.0$, $1.05 \leq y \leq 1.99$, and $0.01 \leq z \leq 0.5$, respectively;

$1.6 \leq x \leq 2.0$, $2.05 \leq y \leq 2.99$, and $0.01 \leq z \leq 0.5$,
30 respectively;

1.6 \leq x \leq 2.0, 3.05 \leq y \leq 3.99, and 0.01 \leq z \leq 0.5, respectively; and

4.6 \leq x \leq 5.0, 3.05 \leq y \leq 3.99, and 0.01 \leq z \leq 0.5, respectively.

5

7. The negative electrode for a battery according to claim 6, wherein the active material layer includes lithium after charging.

10

8. The negative electrode for a battery according to claim 6, wherein the active material layer includes metal and the metal is alloyed with the collector at a part of an interface with the collector.

15

9. A battery comprising:

a negative electrode including:

a collector;

an active material layer provided on the collector, the active material layer including at least one kind of matter in a group consisting of an elementary substance of tin, an elementary substance of silicon, an alloy including at least one of tin and silicon, and a compound including at least one of tin and silicon;

20

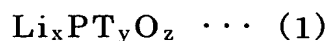
an inorganic compound layer provided on the active material layer, the inorganic compound layer having a chemical composition expressed by general formula (1) described below, and having lithium ion conductivity;

25

electrolyte conducting lithium ions; and

a positive electrode reversibly storing and releasing lithium ions.

30



wherein component T is at least one kind of element selected from an element group consisting of element symbols Ti, Cu, Zr, Mo, Ta, and W, and additionally x, y, and z satisfy
 5 $2.0 \leq x \leq 7.0$, $0.01 \leq y \leq 1.0$, and $3.5 \leq z \leq 8.0$, respectively.

10. A battery comprising:

a negative electrode including:

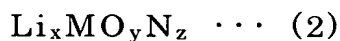
a collector;

10 an active material layer provided on the collector, the active material layer including at least one kind of matter in a group consisting of an elementary substance of tin, an elementary substance of silicon, an alloy including at least one of tin and silicon, and a compound including at least one of tin
 15 and silicon;

an inorganic compound layer provided on the active material layer, the inorganic compound layer having a chemical composition expressed by general formula (2) described below, and having lithium ion conductivity;

20 electrolyte conducting lithium ions; and

a positive electrode reversibly storing and releasing lithium ions.



wherein component M is at least one kind of element
 25 selected from an element group consisting of element symbols Si, B, Ge, Al, C, Ga, and S, and x, y, and z satisfy one of:

$0.6 \leq x \leq 1.0$, $1.05 \leq y \leq 1.99$, and $0.01 \leq z \leq 0.5$, respectively;

$1.6 \leq x \leq 2.0$, $2.05 \leq y \leq 2.99$, and $0.01 \leq z \leq 0.5$,
 30 respectively;

$1.6 \leq x \leq 2.0$, $3.05 \leq y \leq 3.99$, and $0.01 \leq z \leq 0.5$,
respectively; and

$4.6 \leq x \leq 5.0$, $3.05 \leq y \leq 3.99$, and $0.01 \leq z \leq 0.5$,
respectively.